

2010 Changes in the Standing Orders

This document represents the changes in the Standing Orders that will be effective June 1, 2010. The complete document is available at www.kcf1.com, toward the bottom of the page, click on "Standing Orders", or go to the Klamath County Ambulance Advisory Committee Yahoo Group website.

This document shows only excerpts from the Standing Orders that have been changed.

- The areas that have changed are highlighted
- Red font is new text
- Strikethrough is deleted.

ONDANSETRON

TRADE NAME:

Zofran

ACTION:

Potent anti-emetic agent, a selective 5-HT₃ receptor antagonist.

INDICATIONS:

- Nausea or vomiting
- Prophylactic prevention of nausea or vomiting

CONTRAINDICATIONS:

- ☒ Known sensitivity to Ondansetron.
- ☒ Recent administration of Apomorphine (given SC for Parkinson's Disease)
Apomorphine is rarely used – may cause severe hypotension

SIDE EFFECTS & PRECAUTIONS:

May cause minor headache, constipation or diarrhea.

ROUTE & DOSAGE:

EMT – I and EMT - P:

0.1 mg/kg (usual adult dose = max dose is **four 8** mg) slow IV or IM.

NAUSEA & VOMITING

SUBJECTIVE:

Nausea – unpleasant sensation of feeling the urge to vomit.

Retching – spasmodic esophagus and stomach contractions against a closed glottis, often resulting in emesis.

Emesis (vomiting) – forceful abdominal contractions emptying the stomach through the mouth.

OBJECTIVE:

Patient may appear with pale and diaphoretic skin.

Emesis may contain partly digested food particles, be yellow from bile, black from partly digested blood or red from active upper gastrointestinal bleeding.

ASSESSMENT:

Nausea and vomiting are unpleasant sensations and actions with many possible causes.

TREATMENT:

First Responder EMT - B:

- Keep patient comfortable
- Oxygen

EMT - I and P:

- IV with crystalloid
- Ondansetron (Zofran).

I. Guidelines for Transporting ALS and BLS

BLS GUIDELINES

1. If only BLS providers are on scene, the personnel on scene will perform a primary and secondary evaluation, treatment and transport in the accordance with their agency standards and their specific scope of practice within these standing orders.
2. If both BLS and ALS providers are on scene, the patient will be jointly evaluated by both ALS and BLS providers and if both providers agree that the patient care meets the BLS criteria, then patient care can be performed by a BLS provider. If care is initiated by an advanced EMT, the transfer of patient care from ALS to BLS will follows the procedures outline below in the “ADVANCED LIFE SUPPORT (ALS) to BASC LIFE SUPPORT (BLS) GUIDELINES” of this section.
3. Where advanced EMTs are not on scene for patients whose condition requires advanced care, initial BLS transport will not be reasonably delayed, and ALS personnel will be activated as per the agency’s protocol.
4. Any patient requiring change of care from the EMT-B to the EMT-P and/or EMT-I, after the patient was deemed appropriate for BLS Transport by both ALS and BLS providers, will be reported to the supervising physician.

ALS GUIDELINES

1. All outside requests for ALS assistance from BLS response personnel should occur after initial patient contact and evaluation by the responding agency.
2. EMT Basic; Use the following criterion to determine when to call for outside assistance Advanced Life Support (ALS) personnel.
3. EMT Intermediate; For criterion “a” through “e”, initiate EMT Intermediate treatment protocol then determine the need for Paramedic based on criterion below.
 - a. Hypovolemic Shock
 - b. Respiratory Distress
 - c. Unconsciousness
 - d. Cardiogenic Shock
 - e. Trauma with altered mentation
 - f. Impending child birth or immediate post delivery
 - g. Seizures
 - i. 2 or more without clearing post-ictal
 - ii. Witnessed active Grand Mal lasting longer than 5 minutes.
 - h. Critical Burns =
 - iii. Greater than 20% total body surface.

- iv. Facial and/or oral burns
- v. Inhalation injury

4. The following conditions alone do not represent an initial need for ALS care unless they lead to a criteria listed above:

- a. Grand Mal Seizures followed by post-ictal
- b. Dystonic Reaction
- c. Stroke
- d. DNR
- e. Pain Management
- f. Nose Bleed
- g. Hypothermia
- h. Hypertensive
- i. Near Drowning
- j. Nausea/Vomiting
- k. Snake Bite
- l. Spine Trauma
- m. Syncope

5. If you are in doubt about a specific condition that is not addressed above, never hesitate to request ALS.

ADVANCED LIFE SUPPORT (ALS) to BASIC LIFE SUPPORT (BLS) GUIDELINES

1. Care of a BLS patient may be transferred from an advanced EMT, (Paramedic or EMT- Intermediate), to an EMT- B. A BLS patient must have been evaluated by both an EMT- B and an advanced EMT. Further, both the advanced and the basic EMT must agree that the patient needs transport, but the patient condition does not meet ALS criteria listed above, and does not need any of the following treatment under these standing orders:
 - a. IV or IO access.
 - b. ALS procedure (Such as, but not limited to advanced airway, cardiac monitoring and/or chest decompression.)
 - c. ALS medication – (For patients with severe pain and or nausea, for which the standing orders state should be treated by ALS medications, will not have treatment withheld from them in order to be considered stable.)

2. When a patient's care has been transferred from a Paramedic or EMT- I to an EMT-B, the EMT-B as the primary care provider must provide documentation in the PCR that the patient was evaluated and determined BLS in the SOAP (narrative) portion. This documentation must include that the patient was jointly evaluated and both EMT- B and Paramedic or EMT- I, (names listed) agreed that the patient was deemed to meet the BLS treatment criteria at the time of patient evaluation.
3. If the patient condition changes so that the patient requires ALS care will be transferred to an EMT-I or Paramedic without delay.

R. Use of Helicopter for Patient Transports

1. Aeromedical evacuation should be used when available and when it will decrease total patient transport time by 20 minutes or more.
2. The decision to use the aeromedical resource for transport rests with the ground EMS personnel. This decision may be made in conjunction with aeromedical personnel if necessary.
3. Only the highest medically trained EMS person on scene can cancel the helicopter and must document the reason on the patient care report.
4. Any person on scene working for a government sponsored agency can place the helicopter on standby or launch the helicopter. (Police, Fire, EMS, Forest Service, etc.) It is preferred that non-medical personnel place the helicopter on standby only first. If no EMS medical personnel arrive within ten minutes to perform a medical assessment and in their best judgment an air ambulance is needed, then the helicopter may be launched.
5. If any discrepancy or confusion exists on whether to launch/ use aeromedical transport, call medical control.

TRAUMA CONSIDERATIONS

1. *Burns > 30% of total body surface area*
2. *Burns to the face with potentially impending airway obstruction*
3. *Full Trauma Activation. (based on current protocols) Patient must have pulse.*
4. *Discretionary Trauma (based on current protocols)*

MEDICAL CONSIDERATIONS

1. Respiratory arrest patient, subglottic airway or BMV, with spontaneous pulse.
2. STEMI confirmed by 12-lead EKG interpreted by EMT-P or Medical control
3. Localizing neurologic deficit indicative of CVA (onset less than 3 hrs prior) with normal blood sugar.
4. Any serious medical problem with unstable vital signs requiring rapid treatment or immediate surgery.

CONTRAINDICATIONS AND PRECAUTIONS

1. In most cases, patients that are undergoing CPR should not be transported by helicopter.
2. In all cases, patients who are exposed to hazardous materials, and have not been decontaminated, will not be transported by helicopter.

Medical control is available 24 hours a day for questions or concerns when and if air transport is appropriate for the patient's condition. Consider putting the helicopter on STANDBY then contacting on-line medical control for advice.

ETOMIDATE

TRADE NAME:

Amidate

ACTION:

A short acting sedative hypnotic agent.

INDICATIONS:

- Sedation for rapid sequence intubation.

CONTRAINDICATIONS:

- ☠ Known sensitivity to Etomidate.

SIDE EFFECTS & PRECAUTIONS:

- Administer in a large bore, free flowing IV.
- Respiratory depression, hypotension and cardiopulmonary arrest are more likely in the elderly, those with COPD, renal, heart or liver disease.
- Use with caution in the presence of alcohol, barbiturates, narcotics or benzodiazepines.
- Skeletal muscle jerking or movements occur commonly.
- Duration is 4-10 minutes.
- Increase risk of bruxism (masseter muscle spasm) with fast delivery.
- May cause vomiting without paralytic.

HOW SUPPLIED:

2 mg/ml

ROUTE & DOSAGE:

EMT - P:

Adult: 0.3 mg/kg IV over 30 - 60 seconds. Typical adult dose is 20 mg.
0.15-0.2 mg/kg IV if elderly, debilitated or hypotensive.

Pediatric: 0.3 mg/kg IV over 30 - 60 seconds.

SUCCINYLCHOLINE CHLORIDE

TRADE NAME:

Anectine

ACTION:

Depolarizing skeletal muscle relaxant.

INDICATIONS:

- Rapid sequence intubation.

CONTRAINDICATIONS:

- ⊗ Known sensitivity to succinylcholine chloride.
- ⊗ Known severe hyperkalemia
- ⊗ History of malignant hyperthermia.
- ⊗ History of stroke, burns, crush injuries > 4 days and < 6 months previously.
- ⊗ Quadriplegia, paraplegia, muscular dystrophy, multiple sclerosis, amyotrophic lateral sclerosis (ALS) or other neuromuscular disorder of > 4 days duration.
- ~~⊗ History of masseter spasm.~~

SIDE EFFECTS & PRECAUTIONS:

- Succinylcholine chloride causes paralysis, not analgesia or amnesia; conscious patients must receive sedation. Patient will require airway management and ventilation.
- Patients with neuromuscular disorders of > 4 days and healed < 6 months duration are at risk for fatal hyperkalemia, as are patients with ongoing neuromuscular disorders, such as muscular dystrophy, multiple sclerosis, or amyotrophic lateral sclerosis.
- Use with caution in patients with renal failure on dialysis who have severe hyperkalemia.

HOW SUPPLIED:

- 200 mg/10 ml premixed
- 200 mg in powder form
- 500 mg (mixed in 50 ml crystalloid)

ROUTE & DOSAGE:

EMT - P:

2 mg/kg IV or IO.

VECURONIUM (optional)

TRADE NAME:

Norcuron

ACTION:

Non-depolarizing skeletal muscle relaxant.

INDICATIONS:

- Pretreatment for rapid sequence intubation (defasciculating dose) in the presence of increased intracranial pressure and age \geq 10 years.
- To provide paralysis (paralyzing dose) for rapid sequence intubation if succinylcholine is contraindicated.
- To maintain paralysis (maintenance dose) after intubation.
- To relieve isolated masseter muscle spasm ~~due by succinylcholine.~~

CONTRAINDICATIONS:

- ☒ Known sensitivity to vecuronium.

SIDE EFFECTS & PRECAUTIONS:

- Vecuronium causes paralysis, not analgesia or amnesia; conscious patients must receive sedation.
- Patient will require airway management and ventilation.

HOW SUPPLIED:

10 mg/10 ml premixed or

10 mg powdered

ROUTE & DOSAGE:

EMT - P:

Paralyzing Dose: 0.15 mg/kg IV or IO. Usual adult dose is 10 mg.

Maintenance Dose: 0.01 -0.015 mg/kg 25-40 minutes after initial paralysis, then every 12-15 minutes as needed OR 1 mcg/kg/min IV infusion

EPINEPHRINE

TRADE NAME:

Adrenaline

ACTION:

Naturally occurring catecholamine with both alpha and beta adrenergic effects: increases heart rate, myocardial contractility, myocardial oxygen consumption, systemic vascular resistance and causes arterial vasoconstriction and bronchodilation.

INDICATIONS:

- Ventricular fibrillation, pulseless ventricular tachycardia, asystole, PEA.
- Symptomatic bradycardia.
- Anaphylaxis.
- Asthma.

CONTRAINDICATIONS:

- ⊗ Known sensitivity to epinephrine.
- ⊗ Cardiac chest pain.

SIDE EFFECTS & PRECAUTIONS:

- Commonly causes anxiety, tremor, palpitations and increases blood pressure. May cause angina or myocardial infarction.
- Use cautiously in patients over 50 years of age or with a history of coronary artery disease.
- May be inactivated if mixed with alkaline solutions, such as bicarbonate.

HOW SUPPLIED:

- 1 mg/1 ml (1:1,000) ampule or Tubex or Epi-Pen
- 1 mg/10 ml (1:10,000) prefilled syringe
- 30 mg/30 ml (1:1,000) vial

ROUTE & DOSAGE:

First Responder: *After completion of required additional training*

Anaphylaxis (hypotension, bronchospasm, angioedema, itching, hives):

Epi-Pen

EMT - B:

Anaphylaxis (hypotension, bronchospasm, angioedema, itching, hives):

Adult: *0.3 - 0.5 mg = 0.3 - 0.5 ml of 1:1,000 SQ or Auto Injector*
May repeat in 3-5 minutes.

Pediatric: *0.01 mg/kg = 0.01 ml/kg of 1:1,000 SQ or Auto Injector*
Maximum 0.5 mg/dose. May repeat in 3-5 minutes.

EMT - I:

Anaphylaxis (hypotension, bronchospasm, angioedema, itching, hives):

Same as Basic

Cardiac arrest: (ventricular fibrillation, pulseless ventricular tachycardia, pulseless electrical activity or asystole)

Adult: 1 mg of 1:10,000 IV repeated every 3-5 minutes as needed.

Severe bradycardia:

Pediatric: 0.1 – 1 mcg/kg/min

EMT - P:

Asthma or anaphylaxis

Adult: 0.3 – 0.5 mg = 0.3 – 0.5 ml of 1:1,000 IM (IM preferred) or

0.1 mg = 1 ml of 1:10,000 IV or IO.

May repeat in 3-5 minutes.

Pediatric: 0.01 mg/kg = 0.1 ml/kg of 1:10,000 IV or IO.

Maximum 0.5 mg/dose.

May repeat in 3-5 minutes.

Cardiac Arrest

Adult: Initial dose: 1 mg of 1:10,000 IV or

2 mg of 1:10,000 ET.

May repeat every 3-5 minutes.

Pediatric: Initial dose: 0.01 mg/kg (0.1 ml/kg of 1:10,000) IV or IO or

0.1 mg/kg (0.1 ml/kg of 1:1,000) ET then 3 ml NS flush.

May repeat every 3-5 minutes.

Neonates: 0.01 - 0.03 mg/kg (0.1 - 0.3 ml/kg of 1:10,000) IV, IO, ET or UV.

May repeat every 3-5 minutes.

Severe bradycardia or anaphylactic shock

Infusion: mix 1 mg (1:1,000) in 250 ml (4 mcg/ml) or 500 ml (2 mcg/ml) normal saline. 2 - 10 mcg/minute IV titrated to desired effect.

Pediatric: 0.1 – 1 mcg/kg/min

FENTANYL

EMT – I, P or RN

TRADE NAME:

Sublimaze

ACTION:

Potent narcotic analgesic

INDICATIONS:

- Musculoskeletal pain including extremity fractures, crush or amputation injuries, in the absence of head, chest and abdominal injuries.
- Severe burns without airway compromise.
- Cardiac chest pain.
- Abdominal pain.
- **EMT-I use for pain management only.**

CONTRAINDICATIONS:

- ☠ Known sensitivity to fentanyl.

SIDE EFFECTS & PRECAUTIONS:

- Rapid Injection can cause respiratory arrest or chest wall rigidity.
- Give over 30-60 seconds.
- Central nervous system depressant, which can cause respiratory depression, peripheral vasodilation, decreased cardiac output and pupillary constriction.
- If morphine is given wait at least 5-10 minutes before giving fentanyl.
- Do not use if systolic BP < 90 mm Hg or SpO2 < 90%.
- Use with caution (smaller or less frequent doses) in the elderly.
- Naloxone (Narcan) will reverse the respiratory effects of fentanyl.

HOW SUPPLIED:

50 mcg/ml in 2 ml ampules

ROUTE & DOSAGE:

EMT – I, P or RN:

Adult: 50 micrograms (mcg) IV or IO slow over 30-60 seconds, then 25 - 50 mcg IV or IO every 3-5 minutes as needed for severe pain.

Maximum dose 200 mcg.

Pediatric: 1 micrograms (mcg)/kg IV or IO slow over 30-60 seconds, then 0.5 - 1 mcg IV or IO every 3-5 minutes as needed for severe pain up to 4 mcg/kg.

Maximum dose 200 mcg.

CARDIAC CHEST PAIN

SUBJECTIVE:

Chest or epigastric discomfort lasting minutes to hours – not seconds or days. May radiate to neck, jaw, shoulder, inner arm or elbow. May be associated with diaphoresis, nausea, vomiting, SOB, weakness or lightheadedness. May be brought on by exertion or stress. Relieved by rest or nitroglycerine. May have PMH of bypass surgery, angioplasty, angina, heart attack or myocardial infarction.

Medications commonly include, but not limited to:

nitrates (nitroglycerin, Nitrostat, Isordil, nitro patches, Imdur),

calcium channel blockers (Norvasc, Nifedipine, Procardia, Adalat, Diltiazem, Dilacor, Cardizem),

beta blockers (Propranolol, Inderal, Metoprolol, Lopressor, Toprolol, Atenolol, Sotalol (Betapace), Coreg) or

statins (Mevacor, Lipitor, Zocor, Pravachol, Lescol, Rosuvastatin, Crestor)

Typical presentation (anterior, lateral or inferior):

Chest pressure, ache, band, heaviness, crush or “elephant on the chest” lasting minutes to hours – not seconds or days; May radiate to left arm or jaw;

Typical presentation (inferior):

Epigastric distress, pain or “indigestion”; Atypical presentations may include no discomfort.

OBJECTIVE:

Examination may be normal. Patient may appear ashen or sweaty. Patient may be hypotensive, bradycardic or have evidence of pulmonary edema (rales). Cardiac rhythm is monitored to detect the occurrence of ventricular or atrial dysrhythmias.

ASSESSMENT:

Diagnosis of cardiac chest pain or (heart equivalent discomfort) is made on the basis of the patient’s history. Other causes of chest pain include chest wall trauma, esophageal reflux, gastritis, peptic ulcer disease, pneumonia, pericarditis, pleurisy, pancreatitis, costochondritis, gall bladder disease, aortic dissection, aortic aneurysm, pulmonary embolism and anxiety.

TREATMENT:

First Responder:

- Oxygen

EMT - B:

- Aspirin
- May assist with self-administration of patient's own nitroglycerin
- As available 12 Lead ECG and faxed to Sky Lakes ER; assessment will be made by medical control.

EMT - I:

- Cardiac monitor
- IV (20 or 18 gauge preferred) with saline lock unless crystalloid or medications indicated
- Nitroglycerin
- Morphine or Fentanyl (Fentanyl preferred)

EMT - P:

- 12 lead ECG
- STEMI protocol, next page

INSECT STINGS AND ANIMAL/SPIDER BITES

SUBJECTIVE:

Localized pain, burning sensation and itching at the site. Anxiety, restlessness, weakness, dizziness, headache or syncope. Numbness in affected limb or body part, joint pain or muscle cramps. Chest tightening, shortness of breath, abdominal pain, nausea or chills. Animal or insect identification. Allergies. Multiple bites or stings.

OBJECTIVE:

Stings or puncture marks on skin. Redness, swelling, discoloration or blistering at site. Anaphylaxis.

Black Widow Spider Bite: progressive muscle spasm of back, abdomen and large muscle groups, vomiting, seizures, paralysis, hypertension, headache, tingling and burning sensation.

Brown Recluse or Hobo Spider Bite: reddened area with underlying blister formation and surrounding area of necrosis. Over several days area turns dark and becomes ulcerated.

Tick Bites: Lyme Disease may present with distinctive bull's eye rash surrounding the bite developing over a month and accompanied by flu like symptoms.

Animal Bites: contusions or superficial abrasions to severe crush injuries, deep puncture wounds and tissue loss may develop.

ASSESSMENT:

Insect stings, spider bites, scorpion stings, and marine life stings are typical sources of injected poisons or toxins. Gather information from the patient, bystanders and the scene and determine whatever you can about the insect, spider or other possible source of the poisoning.

TREATMENT:

First Responder:

- Scene safety
- Oxygen
- Wound care
- Remove constricting items (clothing, jewelry)

Insect stings: gently remove stinger

Tick: do not remove; refer to hospital

Animal bites: if patient not transported, contact law enforcement

- Epi-Pen for anaphylaxis (additional training required)

EMT - B:

- Epinephrine for anaphylaxis
- Dual lumen airway device

Asystole / Pulseless Electrical Activity (PEA)

SUBJECTIVE:

Syncope & loss of consciousness.

OBJECTIVE:

- Unconsciousness, unresponsive, pulseless & apneic
- AED shows “non-shockable rhythm”
- Cardiac monitor shows asystole in 2 leads or pulseless electrical activity (PEA)

ASSESSMENT:

Asystole or Pulseless Electrical Activity (PEA)

TREATMENT:

- First Responder:**
- CPR
 - Oxygen

- EMT - B:**
- Dual lumen airway device

EMT - Basic can terminate resuscitation efforts if all of the following are met:

- After 5 cycles of CPR with “No Shock Indicated”, and ALS is over 20 minutes from the scene.
- Online medical control consultation agrees with terminating resuscitation efforts.
- Underlying (without CPR) cardiac rhythm is attached to the PCR.

- EMT - I:**
- IV with crystalloid
 - Epinephrine 1 mg IV or IO – repeat every 3-5 minutes
 - Atropine 1 mg IV or IO – for asystole or slow PEA (heart rate <60) – repeat twice at 3-5 minutes intervals
 - Treatable causes:
 - Hypoxia
 - Hypoglycemia
 - Hypovolemia
 - Hypothermia
 - Preexisting acidosis
 - Drug overdose
 - Hyper-/hypokalemia
 - Terminate resuscitation efforts after online medical control consultation

- EMT - P:**
- Endotracheal intubation
 - Consider transcutaneous pacing
 - Sodium bicarbonate (1 mEq/kg IV or IO) if overdose with tricyclic antidepressants
 - Treatable causes:
 - Chest decompression for tension pneumothorax

AUTOMATIC EXTERNAL DEFIBRILLATOR (AED)

FIRST RESPONDERS, EMT - B, I, P

INDICATIONS

Unconscious, unresponsive, pulseless, apneic patient with possible cardiac arrest

PRECAUTIONS

Adult electrodes if 8 years of age or older and have an estimated body weight of greater than 55 pounds (25 kg) or an estimated height of more than 50 inches.

Pediatric wiring and adaptor if 1 - 8 years of age

PROCEDURE

(Totally Re-Written)

1. Prepare Equipment

a. AED or SAED device.

b. Oxygen via bag valve mask or airway.

2. If this is a witnessed arrest attach the device and go directly to step 4.

3. If this is an un-witnessed arrest, perform CPR while attaching the device, then after 2 minutes of CPR

4. Allow the device (according to manufacturer's instruction) to analyze the patient and determine if the underlying cardiac rhythm is shockable.

5. If the device determines that a shock is necessary, allow the device to deliver the initial shock (SAED manually deliver) according to manufacturer's specifications.

6. Immediately after any shock, is delivered, commence CPR for 2 minutes.

7. If the patient remains unconscious after the 2 minutes of CPR, check the patients pulse.

8. If no pulse is felt, allow the device (according to manufacturer's instruction) to analyze the patient and determine if the underlying cardiac rhythm is shockable.

9. Continue the cycle of 2 minutes of CPR followed by analyzing the patient and shocking as indicated at the energy level specified by the device's manufacturer.

WHEN THE DEVICE IS ANALYZING THE PATIENT OR DELIVERING THE SHOCK, MAKE ABSOLUTELY CERTAIN THAT NO ONE IS IN CONTACT WITH THE PATIENT OR THE EQUIPMENT.

AT NO TIME, including the determination of the underlying rhythm, and the delivery of an appropriate shock, shall CPR cease for more than 45 seconds.

AMIODARONE

TRADE NAME:

- Cordarone
- Pacerone

ACTION:

Antiarrhythmic agent.

INDICATIONS:

- Ventricular fibrillation or pulseless ventricular tachycardia unresponsive to initial defibrillation.
- Ventricular tachycardia with a pulse in a stable patient.

CONTRAINDICATIONS:

- ☠ Known sensitivity to Amiodarone.
- ☠ Wolff-Parkinson-White syndrome with narrow complex tachycardia.

SIDE EFFECTS & PRECAUTIONS:

- If severe signs or symptoms develop use immediate cardioversion.
- May cause hypotension.
- May cause or worsen bradycardia or conduction defects.
- May worsen congestive heart failure.
- Rarely may precipitate cardiac dysrhythmias - torsades de pointes.

HOW SUPPLIED:

150 mg/ 3ml ampule and D5W.

ROUTE & DOSAGE:

EMT – I, P:

Ventricular fibrillation/Pulseless ventricular tachycardia:

300 mg IV **in 20-30ml ns**

If no perfusing rhythm 150 mg IV bolus in 3 - 5 minutes.

Ventricular tachycardia with a pulse:

150 mg in 10-100ml ns over 10 minutes

Repeat once in 10 minutes if no change in rhythm.

Post-conversion from v-fib or tachycardia to a perfusing rhythm:

150 mg in 10-100ml normal saline IV over 10 minutes.

I. Documentation and Medical Record Requirements

1. All contacts with patients who are ill or injured must be documented on a pre-hospital care report, whether hand-written or computer-generated
2. All Pre-Hospital Care Report (PHCR) entries are to be dated and timed appropriately. Times are to be recorded as accurately as possible, however the EMT's primary concern is patient care, which will take precedence over timekeeping. Times should represent the course and duration of events. Times may vary from those of other clocks, which are not regularly and continuously time-synchronized.
3. The pre-hospital care form provides written documentation of patient condition and treatment for medical and legal purposes. It also adds to the continuity of patient care after arrival to the hospital.
4. Pre-hospital care reports are to be filled out completely with all pertinent information. The report is a record that reflects on you and the profession as a whole, so be concise, write legibly, spell correctly and use accepted terminology and abbreviations.
5. A patient's refusal of care or transport, transfer to another agency or person, on-line medical control communications, deviations from these standing orders or determination of death in the field will be documented on the pre-hospital care report.
6. In compliance with state regulations a complete pre-hospital care report must be left at the receiving hospital unless the patient's emergency department's nurse or physician receives an appropriate verbal report and gives verbal release, in which case a completed PHCR must be provided to the receiving hospital within 12 hours or the end of your shift, whichever is sooner.
7. If a non-treating EMT does not agree with the care given, it is that EMT's responsibility to discuss his or her reservations with his or her partner and resolve the problem. If the problem cannot be resolved, the non-treating EMT or paramedic shall write out a report documenting his or her reservations about the call. If there were any problems on the call with personnel or equipment which affected the patient outcome, fill out an incident report and forward to the supervising physician.
8. Pre-hospital care reports should be done in the SOAP format, **or a similar and consistent format that includes** ~~and include~~ the following:

B. Personal Protection from Infection Control

1. These orders may be superseded by any agency's policies, procedures or SOGs that are more thorough or protective.
2. All patients will be treated using "Standard Precautions" which includes wearing glove, changing gloves after contact with potentially infective material, removing gloves before driving or touching common surfaces, and washing hands immediately following patient contact.
3. Additional contact precautions (isolation gowns) will be taken if you anticipate that your clothing will have substantial contact with the infected patient, their bodily fluids, or their environmental surfaces.
4. Droplet precautions which include eye protection will be taken for patients that can generate droplets during coughing, sneezing, or the performance of procedures, such as placing an airway.
5. Respiratory precautions which includes the use of a fit-tested NIOSH-approved N95 mask for patients with suspected or known infections transmitted by droplets that remain suspended in the air such as but not limited to:
 - a. Measles
 - b. Varicella (chicken pox)
 - c. Tuberculosis

LIDOCAINE

TRADE NAME:

Xylocaine

ACTION:

Antiarrhythmic and local anesthetic.

INDICATIONS:

- Ventricular fibrillation/tachycardia – online medical control only
- Pretreatment during RSI for increased intracranial pressure or bronchospasm
- IO infusion in conscious patients

CONTRAINDICATIONS:

- ☒ Known sensitivity to lidocaine.

SIDE EFFECTS & PRECAUTIONS:

- Toxicity can produce altered mental status, myocardial depression, and seizures.

HOW SUPPLIED:

- 2% Lidocaine - 100 mg/5 ml prefilled syringe
- 20% Lidocaine - 2 gm/10 ml prefilled syringe
- 0.4 % Lidocaine - 1 gm/250 ml or 2 gm/500 ml saline solution

ROUTE & DOSAGE:

EMT – I

IO infusion in conscious patients

.05 mg/kg of 2% Lidocaine IO

Prior to IO flush on alert, adult patients, SLOWLY administer .5 mg/kg of 2% Lidocaine through the IO hub

Ventricular fibrillation/pulseless ventricular tachycardia

(online medical control only):

Adult: 1.5 mg/kg IV or IO push. Repeat 0.75 mg/kg every 5-10 minutes up to 3 mg/kg maximum.

Wide complex tachycardia

(online medical control only):

Adult: 1.0 mg/kg IV or IO push. Repeat 0.5 mg/kg every 5-10 minutes up to 3 mg/kg maximum.

EMT - P:

Pretreatment for RSI

1.5 mg/kg IV or IO before paralysis

CEREBRAL VASCULAR ACCIDENT (CVA OR STROKE)

SUBJECTIVE:

Sudden onset of focal neurological deficits or an alteration in consciousness. Symptoms can occur alone, in combination, increase, decrease or be maximal severity at onset. These may include headaches, disturbances in consciousness, nausea and vomiting, ataxia, visual loss, diplopia, aphasia, paralysis, slurred speech, dysphasia, seizure, coma and death. May have a history of stroke or transient ischemic attack (TIA). May be taking medication for hypertension or a host of medications for other medical conditions.

OBJECTIVE:

Patient may be unconscious and level of consciousness should be reevaluated on a regular basis. Neurological exam findings may change with time. Pupils may be unequal and reactivity to light may vary. Patient assessment should include the evaluation of speech, language, motor responses and sensations. Limbs should be evaluated for equal strength and motion. Nuchal rigidity can be checked, but this is a late sign. Monitor blood pressure, pulse, respirations, cardiac rhythm and blood sugar.

ASSESSMENT:

Diagnosis of stroke (CVA) is made on the basis of patient history and physical exam. Other causes of an altered mental status can cause trauma, hypoglycemia, seizure disorder, psychiatric disorder and drug ingestion.

TREATMENT:

First Responder:

- Oxygen
- **STROKE ALERT – From time of onset (last seen normal) to arrival at hospital (including transport) < 5.5 hours and all of the following:**
 - i. Lives independently and functional as a baseline lifestyle
 - ii. Has no co-morbid factors such as end stage terminal disease.
 - iii. No convulsive or seizure activity – witnessed or reported.
- **If patient is candidate for STROKE ALERT, report the following findings:**
 - i. F - Facial droop or uneven smile.
 - ii. A - Arm drift. (hold arms out in front)
 - iii. S - Speech abnormalities "You can't teach an old dog new tricks".
 - iv. T - Time last seen normal.

EMT - B:

- Check blood sugar
- Oral glucose if airway is protected
- Dual lumen airway device

EMT - I:

- Cardiac monitor
- IV with crystalloid
- IV dextrose

EMT - P:

- Advanced airway management

ACTIVATED CHARCOAL

TRADE NAME:

Actidose

ACTION:

Absorbs ingested toxic substances and inhibits gastrointestinal absorption by forming a barrier between remaining particulate material and gastrointestinal mucosa.

INDICATIONS:

Oral toxic ingestion, poisoning or overdose in conscious and awake patients within 1 hour of ingestion and after consultation with on-line medical control.

CONTRAINDICATIONS:

- ☒ Known sensitivity to activated charcoal
- ☒ Unconscious patient or diminishing level of consciousness
- ☒ Ingestions of mineral acids or alkalis, petroleum products or cyanide

SIDE EFFECTS & PRECAUTIONS:

- Relatively contraindicated in tricyclic overdoses, administration can result in aspiration or significant particulate obstruction of the airway.
- Do not administer activated charcoal in the presence of Ipecac.

ROUTE & DOSAGE:

First Responder and EMT - B: (Contact medical control)

Adult: 25- 50 grams orally

EMT- I and P (Contact medical control)

Pediatric: 0.5 gm/kg orally

NALOXONE

TRADE NAME:

Narcan

ACTION:

Narcotic antagonist.

INDICATIONS:

Reverse suspected or known narcotic induced respiratory depression due to: morphine, heroin, fentanyl, hydromorphone (Dilaudid), oxycodone (Percodan), meperidine (Demerol), methadone (Dolophine), hydrocodone (Vicodin), codeine, diphenoxylate (Lomotil), propoxyphene (Darvon), pentazocine (Talwin), nalbuphine (Nubain).

CONTRAINDICATIONS:

- ☠ Known sensitivity to naloxone.

SIDE EFFECTS & PRECAUTIONS:

- The narcotic dependent patient may experience frank withdrawal after administration. Be prepared to restrain these patients as they may become angry or violent. The goal is to keep the patient out of respiratory depression but not fully conscious.
- Rapid administration may cause nausea.
- Repeated and large doses may be needed.

HOW SUPPLIED:

0.4 mg or 2 mg/ml vial or pre-filled syringe

ROUTE & DOSAGE:

EMT – I, P:

Adult: **0.4 – 1 mg** **0.4 - 2 mg** titrated to reverse respiratory depression IV, IO, IM or SQ.

Repeat every 1-3 minutes. Maximum 10 mg.

Pediatric: 0.1 mg/kg (max 0.4 mg/dose) titrated to reverse respiratory depression IV, IO, IM or SQ.

Repeat every 1-3 minutes. Maximum 10 mg.

OXYGEN (O2)

TRADE NAME:

None

ACTION:

Essential for normal cellular metabolism and life. Tissue hypoxia causes cell damage and death.

INDICATIONS:

- Suspected hypoxemia,
- respiratory distress,
- acute chest pain,
- shock,
- trauma,
- cardiopulmonary arrest,
- inhalation injury,
- altered level of consciousness.

CONTRAINDICATIONS:

- ☠ Acute paraquat poisoning.

SIDE EFFECTS & PRECAUTIONS:

- Supports combustion.
- Possible respiratory arrest in patients with chronic lung disease, but do not withhold oxygen if patient is in respiratory distress.

HOW SUPPLIED:

Gas

ROUTE & DOSAGE:

First Responder, EMT - B, EMT - I and EMT - P:

1-15 liters/minute as needed 1 - 25 liters/minute as needed